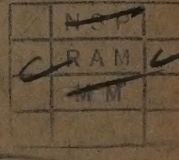
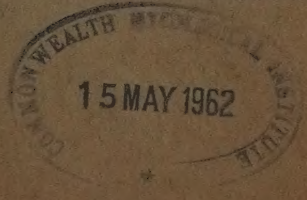
REPORT OF THE

FIRST FAO PLANT PROTECTION MEETING FOR THE NEAR EAST

Held in Damascus, Syria
September 1961

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS





Beginning in January 1955, reports of FAO meetings held as part of the Program of Work of the then Agriculture Division were issued in the present form and numbered chronologically within each calendar year.

Since the establishment of the Plant Production and Protection Division in January 1959, the serial annual chronological numbers refer to reports issued by this Division.

Meeting Report
No. PL/1961/12

REPORT OF THE

FIRST FAO PLANT PROTECTION MEETING FOR THE NEAR EAST

held in Damascus

18 - 22 September 1961

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

September 1961 Rome, Italy

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INTRODUCTION

Following the recommendation of the Fourth FAO Regional Conference for the Near East held in 1958, the First FAO Plant Protection Meeting for the Near East was convened in Damascus, 18-22 September 1961. The Meeting was represented by eight Member Governments. The League of Arab States was represented by an observer. During the Meeting, excursions were arranged by the Ministry of Agriculture to visit agricultural areas and research institutions.

At the opening session of the Meeting, Dr. A. A. Fathy, on behalf of the Minister of Agriculture and Land Reform of the United Arab Republic, welcomed the participants and expressed pleasure in having the First FAO Plant Protection Meeting for the Near East convened in Damascus. He regarded the Meeting as a progressive step in the effort to solve mutual problems in the interest of all countries in the field of plant protection. Looking forward to the time when plant pests and diseases will be put under control and crops are free from enemies, Dr. Fathy considered international co-operation in research and in control campaigns against plant pests and diseases as essential and collaboration in plant quarantine operations as being of great importance. Encouraged by the good representation, he wished the Meeting to be fruitful and all delegates and observers to enjoy their stay in Damascus. Finally, he thanked FAO for its efforts in organizing the Meeting.

On behalf of the Director-General, Dr. A. R. Sidky, FAO Regional Representative for the Near East welcomed delegates and observers and thanked the Government of the United Arab Republic for the hospitality and courtesy extended to the Meeting and for the excellent facilities placed at its disposal. In doing so, Dr. Sidky reaffirmed FAO's intention of promoting international co-operation in plant protection and summarized FAO's major activities in this field. He referred to the resolutions adopted by the FAO Regional Conference for the Near East and pointed out that the Meeting was convened to discuss means for improving national plant protection services and for strengthening inter-governmental collaboration. Dr. Sidky assured the delegates and observers that the Director-General would study with the keenest interest the decisions and recommendations of the Meeting and, so far as lay within his power, would put them into effect with the minimum of delay.

PARTICIPATION IN THE MEETING

Delegates

Iran

Dr. E. ESFANDIARI
Under-Secretary of State (Technical)
Ministry of Agriculture
Teheran

Dr. A. ZOMORRODI
Entomologist
Ministry of Agriculture

Jordan

Dr. K. LUBANI
Chief, Plant Protection and Locust Control Division
Ministry of Agriculture
Amman

Lebanon

Mr. A. ABOU NASSER
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Mr. El-Wifati BASHIR
Assistant Director of Plant Protection and Locust Control
Ministry of Agriculture
Tripoli

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Ministry of Agriculture
Riadh

Mr. Mahmoud MAA MOUN
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Riadh

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Ministry of Agriculture
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Damascus

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Damascus

Mr. R. SKAF
Chief, Pest Control Service
Ministry of Agriculture
Damascus

Mr. A. R. SOUFI
Chief of Plant Quarantine
Lattakia

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Beirut, Lebanon

League of Arab States

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Dr. K. B. LAL
FAO Consultant
(Plant Protection Adviser to the Government of India)

Dr. C. LOGOTHETIS
Entomologist, Crop Protection Branch
Plant Production and Protection Division
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Officers of the Meeting

Dr. A. A. Fathy, Head of the Delegation of the United Arab Republic, was unanimously elected Chairman of the Meeting and the Heads of all the Delegations served alternately as Vice-Chairman. Dr. L. Ling and Dr. K. B. Lal of FAO served as Technical Secretaries.

A Drafting Committee was appointed, consisting of Dr. A. Zomorrodi (Iran), Mr. A. Abou Nasser (Lebanon), Mr. El-Jawhari Hamed (Libya), Mr. A. R. Rohi (UAR), and Dr. K. B. Lal (FAO).

In Memoriam

On the second day of the session, 19 September 1961, the Meeting observed one minute's silence, to mourn the tragic death of Mr. Dag Hammarskjöld, Secretary-General of the United Nations.

CURRENT SITUATION AND DEVELOPMENTS IN PLANT PROTECTION

Iran

Researches on crop pests and diseases and activities relating to their control in the field are undertaken by the Division for Plant Protection in the Ministry of Agriculture. An Administrator-General is in charge of the Division, which has three departments, one for pest and disease control, one for research on insects, plant diseases, rodents and weeds as well as for the chemical analysis of pesticides to determine chemical constituents and concentrations and one for plant quarantine.

In each of the Ostans (provinces) there are departments for the control of pests and diseases.

There are two main research institutes in Iran; one in the Ministry of Agriculture in Teheran and the other in the College of Agriculture in Karadj under the auspices of the Teheran University.

Five other research laboratories are in the Ostans as follows :

1. A Laboratory at Varamine dealing with the pests and diseases of cotton and cereals.

2. Two laboratories in Isfahan, one for the study of pests and diseases of orchards, vegetables, and cotton, and the second for biological study and control of sunn pest.

3. A laboratory at Khoramabad (north of Iran) for studies on pests and diseases of citrus. A small insectarium for rearing Novius cardinalis, a parasite of Icerya purchasi, is established in this area for the last ten years.

4. A laboratory at Rafsendjan (Province Kerman) for the study of pests and diseases of pistachio.

5. A laboratory at Karadj for the study of pests and diseases of sugar beet.

Plant quarantine stations are established at the seaports of Khoramshaher (Persian Gulf) and Pahlavi (Caspian Sea) and at land frontiers bordering Iraq at Khosrovi, Russia at Djolfa, Turkey at Bajarjan and Pakistan at Zahedan. Two other quarantine stations are established at Mehrabad Airport (Teheran) and Abadan Airport. Vacuum fumigation with methyl bromide is practised only in Teheran.

Technical training is given in five agricultural colleges; the biggest is in Karadj where a special one-year course in plant protection is also provided after a three-year general agricultural course for students who choose this branch for specialization.

A four-weeks refresher course in the various aspects of plant protection is provided for the specialists of the Ministry of Agriculture every year.

Jordan

The Division of Plant Protection in the Ministry of Agriculture is concerned mainly with pest and disease control activities. A new plant protection institute has been established this year in Jubaika, about 10 kms. from the capital, Amman, as a result of an agreement between the Governments of Jordan and West Germany, so as to help in developing and strengthening the national plant protection service.

Each of the five districts of Jordan has a plant protection specialist, whose function is to advise on recent methods of control and to carry out demonstrations on the control of different pests and diseases and the proper use of equipment and chemicals. Stocks of pesticides, machines and other plant protection equipment are maintained in Amman and other districts

Major pests and diseases. Desert locust, Mediterranean fruit fly, olive fly, Phylloxera, spider mites, scales, Capnodis, wheat leaf miner, nematodes and viruses attacking vegetables and nursery plants, late blight of tomato, rusts of wheat, mildews on grape, cucurbitae etc., and fusarium wilt of tomato.

Quarantine. Two plant quarantine stations are established, one at Amman and the other at Ramtha on the Syrian border. Two plant quarantine officers are appointed and functioning. A new station at Agaba, on the Red Sea, is proposed. These stations will be provided with the equipment needed for the treatment of agricultural imports.

Legislation. A plant protection law was issued in 1927 which will be revised in the near future to conform to new developments.

Research. Research on pests and plant diseases is carried out by the Research Department in the Ministry of Agriculture, which has modern laboratories at the research station at Jubaika, about 10 kms. from Amman.

Lebanon

Plant protection measures are administered and applied by the Bureau of Plant Protection and Plant Quarantine, which belongs to the Service of Agricultural Resources of the Ministry of Agriculture. The Bureau consists of three sections: Agricultural Entomology, Phytopathology and Plant Quarantine.

The functions of the Entomology and the Phytopathology sections are : study of control measures against agricultural pests and diseases and phytosanitary supervision of private nurseries. The Entomology section also supervizes the trade of agricultural pesticides. The section of Plant Quarantine is concerned with the enforcement of current phytosanitary legislation.

The sections of Entomology and Phytopathology will include an entomologist and a phytopathologist, to be located in Beirut, and one plant protection specialist in each of the four administrative districts (or Mohafazat) of Lebanon. These officers will be assisted by technical assistants with good training.

The Plant Quarantine Section is to be provided with a specialist at Beirut. The entomologist of the Entomology Section is at present assigned to this post. The present staff consists of 21 phytosanitary inspectors distributed among the four border points (Chtaura, Kaa, Abdé, Arida), the three sea ports (Beirut, Tripoli, Saida) and the International Airport at Khaldé. They are also assisted by 18 inspectors of the Fruit Office with functions including phytosanitary inspection and grading of fruits intended for export. The Plant Quarantine Section has a vacuum fumigation installation at the port of Beirut.

Principal pest problems. In brief, the principal problems of pests in the Lebanon are as follows.

1. Pests which are under control through costly and often frequent pesticide treatments.

   a. Codling moth of apple, Carpocapsa pomonella Linn.

   b. Black scale, Chrysomphalus aonidium L.

2. Pests which need costly treatments but with partial success only.

   a. Red mite, Metatotranychus ulmi of fruit trees; M. ulmi is destructive and occurs in many regions; Bryobia practiosa, although rather widespread, is of little importance.

   b. Aonidiella aurantii Mask. of citrus

3. Pests against which control measures are undertaken by the Ministry of Agriculture.

a. Sunn pest, Eurygaster integriceps Putn.

b. Desert locust.

c. Tettigoniid grasshoppers.

d. Field rats.

4. Pests which usually do not receive treatment.

a. Mediterranean fruit fly, Ceratitis capitata Wied.

b. Olive fly, Dacus olea Gmd.

c. Olive kernel borer, Prays oleaellus Fabr.

d. Capnodis of poplar, Capnodia miliaris Klug.

Libya

There are four plant protection agencies, three provincial and one federal. The three provincial plant protection divisions were organized in Tripolitania, Cyrenaica and Fezzan between 1957 and 1960. The Federal Administration for Plant Protection and Locust Control was set up within the Ministry of Agriculture in 1961.

The locust control section is equipped with sufficient sprayers and transport vehicles, as well as radio transmission units. Poison-bating is the main method used for locust control.

A plant quarantine law was enacted in 1958 but there are still no regulations or executive orders to implement the various provisions of the law. The newly established Ministry of Agriculture has taken steps to close this gap.

The major insect pests are the cotton-worm, the Mediterranean fruit fly, and the olive fly. Plant diseases are not as harmful as insect pests, though late and early blights on potatoes and tomatoes cause some damage.

Libya lacks qualified personnel to conduct researches on pests and diseases and therefore the small number of university graduates available is utilized to organize control campaigns, give demonstrations to farmers, and to provide other assistance on plant protection.

Saudi Arabia

The Plant Protection Department of the Ministry of Agriculture has two sections, one for insect collections and another for pest and plant disease control. Two other sections for foreign quarantine and domestic quarantine are being organized.

The Department maintains several permanent units for pest control, under the charge of specialists and provided with pesticides and control equipment. There are also several mobile units which move from place to place according to the plant protection requirements of crops. Seasonal control campaigns against the desert locust are organized under a separate Department.

All pest control operations are conducted at Government expense. Steps are being taken to ensure that the use of pesticides by farmers does not lead to accidents.

Some major pests are Laphygma exigua, Agrotis ypsilon, Phytonomous variabilis and Aprocrema alfalfella on alfalfa, which is an important crop, Meloidogyne spp. on tomato and other vegetable crops, Phyllocnistis citrella on citrus and Dacus ciliatus on melons and cucumbers. The smut diseases, Sphacelotheca sorghi on millets and Ustilago nuda on barley are common. Rusts on wheat and barley are suspected but not surveyed yet.

Republic of Sudan

A Plant Protection Division was established in July 1959, prior to which the Entomological Section of the Research Division was responsible for research as well as pest control. The Chief of the Plant Protection Division is assisted by an Assistant Chief as well as by several senior technical officers, including those specializing in control operations, plant quarantine service, plant pathology, entomology, storage pests and bird control. The functions of the Division include pest and plant disease surveys, assessments of losses to crops, organization of control operations, enforcement of plant quarantine laws and regulations, study of storage pests and the methods of their control and the regulation of the import of pesticides. The Division engages a total of approximately 150 officers and technicians, 90 permanent and 725 temporary field staff and a large body of labourers.

In addition to the headquarters of the Division in Khartoum, plant protection centers have been or are being established in the Blue Nile, Northern Kassala, Kordofan, Darfur and Khartoum Provinces for plant protection and in Khartoum, Port Sudan, Halfa, Kassala, Juba and Geneina for plant quarantine. Steps are being taken to provide modern equipment at Port Sudan and Wadi Halfa for the fumigation of plants and plant products, imported or intended for export.

The desert locust, tree locust and grasshoppers, the cotton pests (stainer, jassid, thrips, aphid, bollworms and flea beetle), cutworms, fruit and vegetable pests, dura birds and field rats constitute the major pest problems. Leaf curl and black arm of cotton and mildew are the major disease problems.

In the Sudan, heavy losses to crops are caused by pests and diseases. Some pests and diseases, for example locusts, the Khapra beetle and possibly weaver birds, require control on national or international basis. Some others, for example, cotton bollworms, grasshoppers, field rats and blackarm and leaf curl diseases of cotton have to be controlled collectively on provincial, district or local basis. On the other hand, some pests, for example, cotton jassid, thrips, aphids, most pests of fruits and vegetables, weeds and the parasitic, flowering plant, Striga hermonthica, as well as seed-borne diseases can be effecitvely controlled by individual action.

United Arab Republic

Egypt. The Plant Protection Department maintains :

1. An Entomological Research Sub-Department, consisting of ten sections for studies on pests of cotton, fruit trees, truck and field crops as well as on locusts and grasshoppers, acarina, parasites and predators of pests, honey bees, silkworms and insecticides. A section deals with the identification of insects and their preservation.

2. A Plant Pathology Research Sub-Department with six sections for researches on the diseases of cotton, cereal and other field crops, truck crops and fruit trees as well as on nematodes, virus diseases and fungicides.

3. A Plant Quarantine Sub-Department with headquarters at Alexandria and stations at all seaports and airports, provided with modern equipment for inspection and treatment.

4. A Pest Survey Sub-Department for the survey of insects and plant diseases of economic importance.

Current investigations include studies on cotton pests, such as greasy cutworms, leaf worm, spiny bollworms, pink bollworm and red spider mites as well as pests of various other crops. In regard to plant diseases, the testing of various cotton varieties against Fusarium wilt and studies on the disinfection of soil and seeds as protective measures against damping off have given good results.

Work on locusts and grasshoppers has included biological studies on the Egyptian grasshopper.

Some new virus diseases of citrus have been recorded.

All imported, transit and intransit consignments of plants and plant products are inspected at the point of entry at seaports and airports. Different methods of treatment are applied on the consignments according to inspection results and plant quarantine laws.

Methods of treatment comprise fumigation under NAP or Vacuum, hot air in tunnels or cabinets and dipping in hot water and chemicals.

Plants and plant products intended for export are inspected and sometimes treated to comply with the plant quarantine laws of the importing countries.

Plant quarantine greenhouses and gardens are being established in Alexandria.

Syria. The Directorate of Plant Protection in the Ministry of Agriculture is responsible for researches on pests, plant diseases and pesticides, organization of pest and plant disease control campaigns and operation of plant quarantine regulations. Its Control Service draws up control plans, basing operational techniques on the results of researches available and demonstrating and popularizing such techniques among farmers. Its Entomological Service is concerned with the identification of harmful insects and the study of their distribution, biology, natural enemies and methods of their control by chemical, mechanical and other means. The Plant Pathological Service performs similar functions with respect to plant diseases and attempts to determine preventive treatments against them. Similar services exist for plant quarantine, study and use of agricultural chemicals, weed surveys and testing of herbicides. An Agricultural Forecast Division is to be shortly established which would study the conditions under which agricultural pests and diseases appear and predict the times of their appearances so as to indicate appropriate periods for control operations.

Aircraft is used in pest control. The Ministry of Agriculture owns one fixed-wing aeroplane and has hired two helicopters in 1961 for the control of olive fly and cotton pests.

The major pests which have required extensive control campaigns have been the desert locust, the Moroccan locust, the sunn pest and field rats. Among pests of cotton, which is a very important crop, spiny and pink bollworms are the most destructive and so are the red spider mites, Bryobia practiosa and Metatetranychus ulmi, on apple. The Mediterranean fruit fly mainly attacks citrus in early stages of growth but is not a serious pest. The methods of locust control have been poison-baiting,

dusting and spraying. Sunn pest has been controlled by dusting with 10 % DDT and zinc phosphide is used against field rats. Rogor has been used against olive fly.

Plant quarantine constitutes a very important aspect. There are thirteen fumigation centers : at the Lattakia port that links Syria by sea with the outside world, at Arida, Dabbousiyeh, Joussiyeh and Jdeidet Yabouss between Syria and Lebanon, at Deraa between Syria and Jordan, at Abou Shamat, Abou Kamal and Tell Kochak between Syria and Iraq and at Kamishly, Midan Akbas, Bab el Hawa and Kassab between Syria and Turkey.

SOME PESTS AND DISEASES OF REGIONAL IMPORTANCE

Mediterranean fruit fly

The Mediterranean fruit fly is one of the most destructive fruit flies in Lebanon, Jordan, Libya and the United Arab Republic (Egypt and Syria). It is not found in Iran and the Sudan.

The fly attacks a great variety of fruits and in most areas it breeds almost continuously throughout the year. It causes considerable damage to all fruits, including stone fruits, but is most destructive on citrus. In addition to causing the premature dropping of fruit and damaging developed fruit, even slight infestations may result in great losses to exporters as entire consignments may be found unacceptable to importing countries.

Iran and the Sudan, where the insect does not exist, take necessary phytosanitary measures to prevent its entry. In the other countries, where it is a pest, the fly is controlled by sprays with a number of insecticides. The immature stages of the insect in citrus can be killed satisfactorily by fumigation or dipping in ethylene dibromide and exporting countries are planning to introduce these methods of control. Experiments are also planned for spraying citrus trees against the adult flies with poisons to which protein hydrolizates are added. This method can cause high mortality in the fly population without destroying the various useful parasites occurring in the grove.

Although control with chemicals is possible, sometimes it becomes rather expensive. Better results could be obtained with better knowledge of the biology of the insect under various conditions of the region, which vary from mountainous or temperate to sub-tropical and occasionally to tropical.

A certain degree of control can also be achieved through the use of parasites which can be bred in the laboratory rather easily. No successful use of this method, however, has yet been made in the area, although attempts towards this end were made in the Southern Region of the U.A.R. Another possible approach is control by sterilization of the male flies by irradiation and the U.A.R. has started investigations on this method in 1961.

Citrus virus diseases

Virus diseases of citrus have not received adequate attention in most countries in the Near East. Psorosis, which is known to occur in Iran (northern region), Lebanon and U.A.R. (both Egypt and Syria), appears to be the most widespread disease. Xyloporosis is present in Jordan, Lebanon, and U.A.R.

In Lebanon, psorosis has been found to occur in three strains : A., concave gum, and blind pocket. Xyloporosis was first recorded in 1960 exclusively on mandarines, regardless of the rootstock used, and is still not limited in distribution. In addition, the stubborn disease has been recognized since 1954. There also exist in Lebanon three diseases probably of virus origin: Rio Grande gummosis, Impietratura gummosis, and slow decline.

In Egypt also, psorosis occurs in the same three strains as in Lebanon. Xyloporosis is very common whenever Palestinian sweet lime is used as a rootstock for shamouti sweet orange or is grafted on sour orange rootstock. Tristeza was found to be present in several variety collections maintained by the Ministry of Agriculture. There is no indication that the tristeza virus is being spread by vectors in Egypt. Phloem discoloration of sweet orange was first described from Egypt and has not been reported elsewhere. Bud-union creasing of sweet orange on rough lemon rootstock appears only in experimental plots, as rough lemon is not used in commercial propagation. Vein clearing of Aeglopsis choralieri is regarded to be caused by a virus not related to tristeza virus. A citrus certification program has been established for selecting virus-free citrus bud-wood.

Other pests

In addition to desert locust, sunn pest and olive fly, the following pests were regarded by the Meeting as requiring regional attention : spider mites of apple, cotton insects and Moroccan locust.

REGIONAL CO-OPERATION

International co-operation is often essential for the efficient control of destructive pests and is most desirable for the prevention of the invasion of pests and diseases into a geographic area. In view of the excellent progress being made in other continents in furthering plant protection activities through the establishment and operation of regional bodies, the Meeting considered it important to set up a similar body in the Near East. To this end, the Meeting, in one of its recommendations, requested the Director-General to establish a Plant Protection Committee for the Near East, in which all the governments in the region would be invited to participate.

The Meeting suggested the functions of the proposed Committee as follows :

(a) to review the current situation of major pests and diseases in the Region ;

(b) to advise on recent methods of control and survey techniques ;

(c) to advise on plant quarantine measures, including standardization of procedures and techniques ;

(d) to consider problems requiring cooperation on a regional basis and measures for mutual assistance ;

(e) to review and advise on coordination of research on plant protection so as to obtain maximum benefit out of minimum costs.

In order to promote plant protection activities in the Near East, the Meeting requested that the Director-General of FAO appoint three regional experts to be attached to the FAO Regional Office to perform the required duties in the fields of entomology, plant pathology and plant quarantine, respectively.

Following the recommendation of the Fourth FAO Regional Conference, the Meeting also explored the possibility of formulating a regional agreement to strengthen inter-governmental collaboration in the field of plant protection. Whereas the Meeting regarded it highly desirable to have a regional agreement for the Near East, similar to the one now operating in the South-East Asia and Pacific region, it felt that the formulation of a formal agreement would require more careful consideration. It was also of the view that the agreement should not be confined to plant quarantine only but should cover the subject of plant protection in all its aspects. The Meeting suggested that representatives of govern-

ments study the scope and provisions of the proposed agreement, with special reference to the following points :

(a) the desirability of including a description of minimum requirements of national plant protection services ;

(b) the pests and the diseases which require international collaboration in their control and investigation and which should be given special attention in plant quarantine enforcement.

The Meeting invited the delegates to report their views on the agreement at the next Meeting.

TRAINING OF TECHNICAL PERSONNEL

The Meeting was unanimously of the view that technical personnel engaged in plant protection must be well trained. While training at national and lower levels must be organized in the countries themselves, the Meeting strongly felt the need for advanced training in different aspects of plant protection, including plant quarantine, on a regional basis. It urged, therefore, that FAO should take early steps to organize a few such training courses in plant protection in different areas of the region at suitable intervals.

The Meeting was also of the view that the countries of the Near East region should fully use the facilities for training available under the Expanded Technical Assistance Program of FAO or under such other bilateral aid programs.

RECOMMENDATIONS

The Meeting

1. Recognizing that many problems concerning plant pest and disease control are of concern to a number of countries in a geographic region, and

Considering the need for strengthening inter-governmental co-operation in combatting and investigating pests and diseases,

Recommended that the Director-General of FAO establish a Plant Protection Committee for the Near East to perform the functions specified in this report.

2. Recognizing the need for technical assistance in the improvement of national plant protection services in the survey of plant pests and diseases, and on the development of a regional information and reporting service, and

Considering the recommendation of the Fourth FAO Regional Conference for the Near East relating to the need for FAO to provide experts' services,

Recommended that the Director-General of FAO appoint three experts to be attached to the FAO Regional Office in the fields of entomology, plant pathology, and plant quarantine, respectively.

3. Recognizing the shortage of technical personnel as a major handicap in the promotion of plant protection in the Near East, and

Realizing that the existing training facilities within the Region are inadequate to meet the urgent needs,

Recommended that the Director-General of FAO give high priority to the organization of a plant protection training course for the Near East and that governments make efforts to develop, with FAO's assistance, national training facilities in plant protection.

4. Reaffirming the need for a regional agreement to strengthen inter-governmental collaboration in plant protection as indicated by the Fourth FAO Regional Conference, and

Having examined the draft agreement circulated by FAO,

Recommended that the FAO secretariat modify the draft in the light of the deliberation in the Meeting and circulate it to delegates to obtain their views in this regard.

5. Recognizing the need for outside assistance to supplement the national efforts in accelerating plant protection progress, and

Considering that a number of pest and disease problems may be studied at a regional center for the benefit of all countries,

Recommended that FAO examine the possibility of establishing a regional Plant Protection Research Institute through the assistance of the United Nations Special Fund for Economic Developments and approach governments in the Region to obtain their views.

6. Recognizing the need for appropriate and detailed specifications for pesticides for various uses in agriculture,

Considering that the specifications, established by the World Health Organization, are intended to be applicable only to pesticides for use in public health, and

Noting that the number and the variety of pesticides used in agriculture are far greater than those in public health,

Recommended that the Director-General of FAO convene an experts' group to establish specifications for pesticides for agricultural uses.

7. Recognizing the importance of the problem constituted by the Moroccan locust in several countries of the Near East,

Noting that since 1949 there has been no general meeting of experts of the countries affected by this pest,

Recalling that the Fourth FAO Regional Conference in 1958 requested the Director-General to convene a general conference on this problem,

Recommended that the Director-General of FAO convene the proposed conference at the earliest possible date.

8. Recognizing the value of personal contacts and discussions among senior specialists in plant protection and the need for such specialists to acquire first-hand knowledge on the current advances in plant protection techniques, and

Realizing that such a purpose can be best achieved by providing the exchange of visits among senior specialists,

Recommended that the governments in the Region utilize fully the facilities available under the FAO Program of Technical Assistance and other aid programs with a view to facilitating the visits of senior plant protection specialists.

9. Recognizing the need for further consideration of the many problems reviewed at the present Meeting,

Noting the wishes expressed by the Delegates of Jordan, Lebanon and United Arab Republic to hold the next meeting in their countries,

Recommended that the Director-General convene the next Plant Protection Meeting in 1962 in Amman, Beirut or Cairo.